



# HONEYCOMB CERAMIC SUBSTRATE

蜂窝陶瓷载体



#### 江苏省宜兴非金属化工机械厂有限公司 Jiangsu Province Yixing Nonmetallic Chemical Machinery Factory Co.,Ltd.

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企业网 站





# 企业简介 **COMPANY PROFILE**

Jiangsu Province Yixing non-metallic chemical machinery factory Co., Ltd., was founded in 1957, inherited 60 years' experience in ceramic research, development and production, Yuxing has grown into nationwide high-tech enterprise with structural ceramic and Micro-porous ceramic as core products. Our factory covers 150 thousand square meters and own nearly one hundred million CNY fixed assets. The complete production process as well as the high standard requirement process allow each product of Yuxing to meet our clients' requirements. Now, Yuxing have developed nearly 1000 different dimensions products and reach an annual production capacity of 8million liters.

江苏省宜兴非金属化工机械厂有限公司创建于

Yuxing pay much attention on products quality control, environmental protection and occupational health of employees and own certificates of IATF16949, ISO14001 and ISO45001. In order to improve the management and reach international level, Yuxing has established long-term cooperation with the world famous international consulting companies and carry out TPM, Quality FMEA, 5S, lean production and safety production training timing.







1957年,传承60年专注陶瓷领域研发生产的经验, 成长为以结构陶瓷、微孔陶瓷为核心的国家级高新技 术企业,企业占地面积 15 万平米,拥有固定资产近 一个亿,全流程高标准的过程控制保障每件宇星产品 都满足客户的要求。目前已形成千个规格尺寸800万 升/年的生产能力。

> Certificate of Registration Jiangsu Province Vixing Nonmetallic Chemical Machinery Factory Co., Ltd. IATF 16949:2016





In the past more than 60years, as a leader of the Micro-porous ceramic technolog, Yuxing always insists on placing technolog. innovation as the core power of enterprise development, Investment more than 20 million CNY on R&D and technology upon every year. Now, Yuxing own national and provincial technical research and development center, has take on more than 10 na and provincial science and technology projects, owned over 100 nation patents, among them:

- 2 items 863 National Project;
- 6 items National Science and Technology Innovation Fund Project;
- 4 items National and Provincial Torch Program;
- 1 item Provincial Science and Technology Achievement Transformation Project;
- 4 items Provincial Science and Technology Key Project, Provincial Science and Technology Support Plan Project; Own 55 patents, including 16 invention patents and 39 utility model patents;

长期以来,作为中国微孔陶瓷技术的领航者,宇星始终坚持将科技 创新作为企业发展的核心动力,每年投入 2000 多万进行研发和技术改 造升级,目前拥有国家级和省级非金属材料研发中心,先后承担了 10 多项国家级和省级科研项目,获得了超过100项国家专利,其中:

国家 863 计划项目 2 项;

国家级科技创新基金项目 6 项;

国家级、省级火炬计划4项;

省科技成果转化项目1项;

省科技攻关项目、省科技支撑计划项目 4 项;

拥有专利64件,其中发明专利24件,实用新型专利40件。

















### 蜂窝陶瓷发展历程

# **PROFESSIONAL HISTORY**

We started developing honeycomb ceramic substrate in 1984. The earliest enterprise of researching, developing and producing honeycomb ceramic substrate in China.

With more than 30 years' experience in honeycomb ceramic substrate R&D and production, as the leader of China's honeycomb ceramic substrate manufacture and creator, of China's honeycomb ceramic substrate standard, Yuxing has filled the industry blank with continuous innovation technology and products, Witness and participate the milestone development of honeycomb ceramic substrate in china.

公司于1984年开始研制蜂窝陶瓷,是国内较早研发和生产蜂窝陶瓷的企业。

三十多年来专注蜂窝陶瓷的研发和生产,作为中国蜂窝陶瓷行业的深耕者和中国陶瓷行业标准的制定者宇星以不断 创新的技术和产品推动行业发展,见证并参与了蜂窝陶瓷在中国的里程碑式发展。

Our company cooperated with Shanghai Institute of Ceramics, Chinese Academy of Sciences to firstly start to develop and produce cordierite honeycomb ceramic at home, and passed identification by Jiangsu Province Science and Technology Commission in 1985.



The 400 hole / square inch thin wall cordierite honeycomb ceramics project is included in the eighth five year plan of the country.

Honeycomb ceramic won the national new products.

Our company led to draft "honeycomb ceramic" national standard of PRC's building materials industry.

我公司牵牵头起草了中华人民共和国建材行 业《蜂窝陶瓷》标准。



1984 O

1989

1996

1998

我公司与中国科学院上海硅酸盐研究所合作率先 在国内开发研制和生产堇青石蜂窝陶瓷,1985年通 过江苏省科委的鉴定。。

200 hole/inch2 thin-wall thickness cordierite honeycomb ceramic won second class prize of Jiangsu Advanced Science and Technology.

200 孔 / 平方英寸薄壁堇青石蜂窝陶瓷荣获江苏 省科技进步二等奖。

400 孔 / 平方英寸薄壁堇青石蜂窝陶瓷项目被列 入国家第八个五年规划。

蜂窝陶瓷荣获国家级新产品。



Honeycomb ceramic was listed into national key torch program project.

蜂窝陶瓷系列产品获重点国家级火炬计划项目。



与北京交通大学、解放军 军事交通学院合作研发柴油机 碳烟过滤用壁流式陶瓷过滤体, 并列入国家 863 计划项目,实 现了产业化。





2004

2005

2006

2009

Our company cooperated with Beijing Jiaotong University and Military Transportation University to develop DPF and was listed into national "863" planning project the next year.



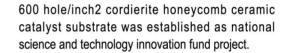
Diesel Particulate Filter(DPF) won national key new 2003 product certificate. 柴油车尾气净化用壁流式蜂窝陶瓷荣获国家重 0

点新产品证书。



Diesel Particulate Filter(DPF) was listed into national and provincial torch planning program.

柴油车尾气净化用壁流式蜂窝陶瓷被立为国家 级和省级火炬计划项。



600 孔 / 平方英寸堇青石蜂窝陶瓷催化剂 载体被立为国家科技创新基金项目。

600 hole/inch2 cordierite honeycomb ceramic catalyst substrate was established as national and provincial torch planning project.



科技型中小企业技术创新基金

立项证书

600 孔 / 平方英寸堇青石蜂窝陶 瓷催化剂载体被立为国家级和省级火 炬计划项目。

宇星牌蜂窝陶瓷荣获江苏省名牌产品。

主要起草了《柴油机尾气颗粒捕捉器用壁 流式蜂窝陶瓷》行业标准。

满足柴油车国 Ⅳ 以上排放标准的大规格堇 青石蜂窝陶瓷载体,被立为江苏省科技成果转化 专项资金项目。

国六用 400/4,600/3 蜂窝陶瓷载体研发成功。



Yuxing honeycomb ceramic substrate won famous-brand product of Jiangsu province.



Our company participated in drafting national industry standard of Diesel Particulate Filter(DPF) .



Large-size cordierite honeycomb ceramic substrate which meets Euro-IV or higher emission standard of diesel engine was listed in special fund project of Jiangsu's technology achievement transformation.

R&D 400/4,600/3 honeycomb ceramic substrate successfully.





## 蜂窝陶瓷简介

# PRODUCTS INTRODUCTION

#### 汽油机尾气净化用蜂窝陶瓷载体 (TWC)

Honeycomb Ceramic Substrate Used for Gasoline Engine After-treatment System(TWC)





## (TWC)Product Highlights 产品特点

Low Coefficient of Thermal Expansion 热膨胀系数低

Good Thermal Shock Resistance 抗热震性能好

Thin Wall Thickness 孔壁薄

Lower Back Pressure Drop

High Surface Area 比表面积高

Uniformity and Stability Water Absorption 吸水率一致性好

Ideal Matching with Various Catalysts 与催化剂匹配性好

Narrow Tolerance, High ISO strength, Easy for Canning. 尺寸公差小,抗压强度高,易于封装

# 汽油机颗粒过滤用蜂窝陶瓷载体 (GPF) Gasoline Particulate Filter (GPF)



Gasoline Particulate Filter(GPF) use for gasoline engine, Filter and capture soot particles in exhaust gas, able to meet the particular matter (PM) and Particular number(PN) of China VI and Euro VI emission standard, It is a standard products in the aftertreatment system for gasoline vehicles that meet the China VI and Euro VI emission standards.

该产品应用于汽油机尾气净化,过滤捕集尾气中碳烟颗粒,PM、PN 均满足国六和欧六排放标准要求,是汽油车满足国六和欧六排放标准后处理系统中标准配置。

### (GPF)Product Highlights 产品特点

Narrow Pore diameter distribution 孔径分布窄

High Porosity 气孔率高

High Filtration Efficiency 过滤效率高

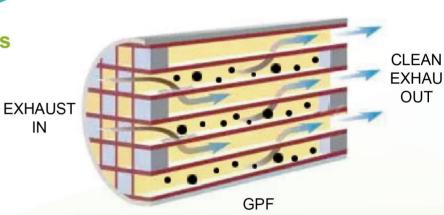
Low Backpressure Drop 排气背压低

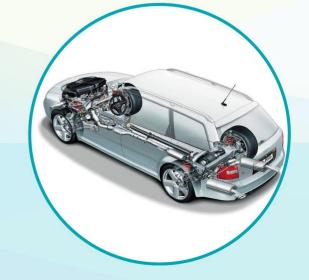
Low Coefficient of Thermal Expansion 热膨胀系数低

High Temperature Resistance and Thermal Shock Resistance 良好的抗高温性和耐热冲击性

Ideal Matching with Various Catalysts 与催化剂匹配良好

Narrow Tolerance, High ISO Strength, Easy for Canning 尺寸公差小、机械强度高、易于封装







#### 柴油机尾气净化用蜂窝陶瓷载体(DOC/SCR)

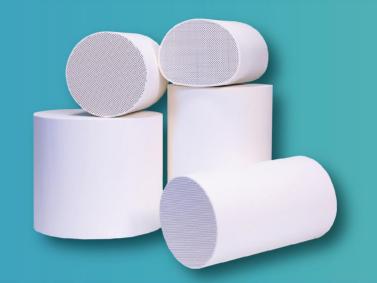
Honeycomb Ceramic Substrate Used for Diesel Engine After-treatment System(DOC and SCR)



The DOC and SCR Ceramic Substrate can meet Euro V and European VI emission standards and widely used in Cummins, Weichai, Yuchai, FAW, Yunnei and other OEMs, Our market share keeps ahead.

产品可满足欧 V,欧 VI 排放标准要求,产品已广泛应用于康明斯、潍柴、玉柴、中国一汽,云内动力等OEM 主机厂,市场份额遥遥领先。

## Max diameter 13 inch

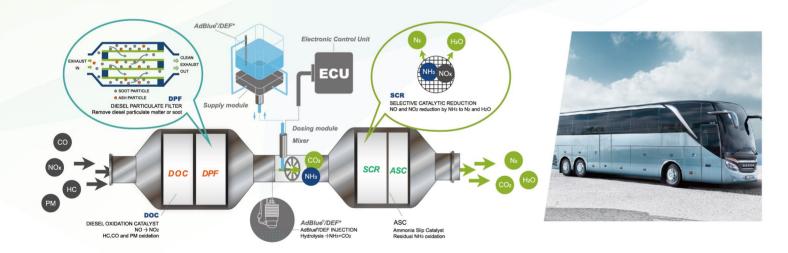


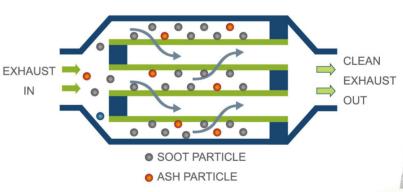
柴油机碳烟颗粒过滤用蜂窝陶瓷载体(DPF)

Diesel Particulate Filter Used for Diesel Engine After-treeatment System(DPF)

The Diesel Particulate Filter(DPF) able to meet the Particular Matter(PM) and Particular Number (PN) regulations that legislated in European, American and China countries, such as Euro V, Euro VI, China VI, CARB and VERT.

该产品不仅可以满足欧六和国六排放标准中对PM 的要求,还可以满足PN 的要求,产品已达到欧V,欧 VI 和国六排放要求,并可满足 CARB 和 VERT的认证要求。







## (DOC and SCR)Product Highlights

Low Coefficient of Thermal Expansion

Good Thermal Shock Resistance

Thin Wall Thickness

Lower Back Pressure Drop

High Surface Area

Uniformity and Stability Water Absorption

Ideal Matching with Various Catalysts

Narrow Tolerance, High ISO strength, Easy for Canning.

#### 产品特点

热膨胀系数低,

抗热震性能好,

孔壁薄,

背压小,

比表面积高,

吸水率一致性好,

与催化剂匹配性好,

尺寸公差小,抗压强度高,易于封装。

### (DPF)Product Highlights

**Uniformity Pore Diameter** 

Uniformity Pore Distribution

**High Porosity** 

Low Back Pressure Drop

High Filtration Efficiency

Low Coefficient of Thermal Expansion

Good Thermal Shock Resistance

High Temperature Resistance

Ideal Matching with Various Catalysts

Narrow Tolerance, High ISO strength, Easy for Canning

#### 产品特点

孔径一致性好

气孔分布均匀

气孔率高

背压低

碳烟颗粒过滤效率高

热膨胀系数低

抗热震性能好

耐高温

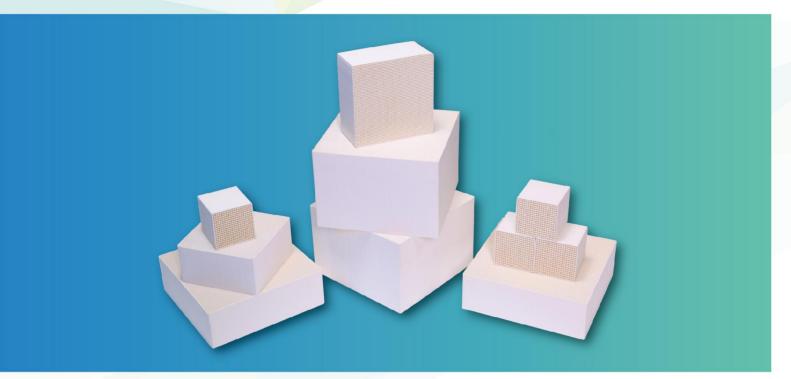
与催化剂匹配性好

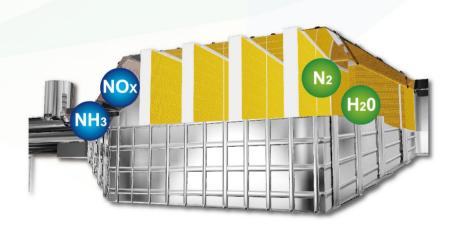
尺寸公差小,抗压强度高,易于封装

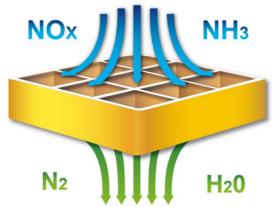


#### 工业废气催化净化用蜂窝陶瓷载体

Honeycomb Ceramic Substrate used for Industrial Waste Gas After-treatment System







#### **Product Highlights**

Low Coefficient of Thermal Expansion Good Thermal Shock Resistance High Surface Area

High Porosity

Low Back Pressure Drop

Good Resistance to Chemical Corrosion

Good Thermal stability, Resistance High Temperature

Ideal Matching with Various Catalysts

#### 产品特点

热膨胀系数低 抗热震性能好 比表面积大

气孔率高

通气阻力小 耐化学腐蚀

热稳定性能好,耐高温 与催化剂匹配性好









## 先进的研发,测试和生产设备

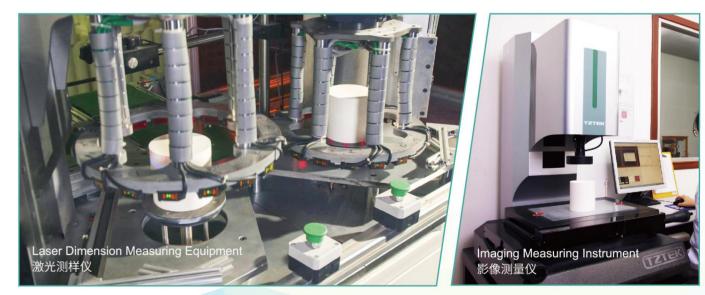
# ADVANCED R&D, TESTING AND PRODUCTION EQUIPMENT

We are always pay much attention on technology innovation, invest 10-15% of sales every year on R&D and technological upgrading.

Our R&D equipment fixed assets is more than 15million CNY, 90% of our test equipments are the top famous brands in the worldwide.

一直以来我们非常重视科技创新工作,每年投入销售的10-15%进行研发和技术改造升级。

目前研发设备固定资产超过1500万,绝大部分设备都是世界一流品牌。







ISO Strength Test Equipment 等静压强度测试仪



Coefficient of Thermal Expansion Test Equipment 热膨胀系数测试仪



Back Pressure Drop Test Equipment 背压测试仪



Mercury pressure meter 全自动压汞仪



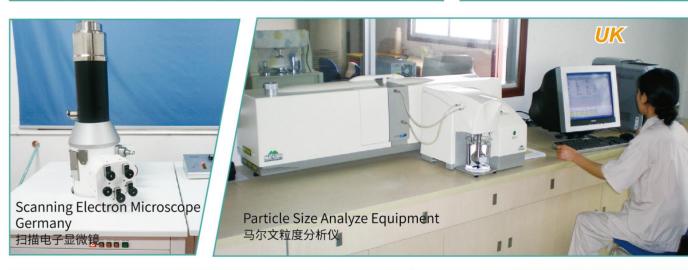
Water Absorption Test Equipment 吸水率测试仪



X—Ray Fluorescence(XRF) Test Equipment XRF 荧光光谱分析仪









## 产品规格尺寸

# **PRODUCTS CATALOG**

Own Four types of products, with nearly 1000 dimensions, Matching more than 90% of different brands, different models of cars', buses' and trucks' application requirement.

四大类的产品,拥有近千种规格尺寸,满足全球 90% 以上不同品牌,不同车型的配套需求。

Туре	Shape	Cell Density (CPSI)	Min Diameter mm/Inch	Max Diameter Mm/Inch
TWC		300,400,600	76.2 3.0"	143.8 5.66"
TWC		300,400,600	57.15 2.25"	169.7 6.68"
GPF		300	101.6 4.0"	143.8 5.66"
DOC/SCR		300,400,600	143.8 5.66"	330 13"
DPF		100,200,300	76.2 3.0"	355 14"
VOC		50,100,200, 230,300,400	50 1.96"	150 1.96"

# | Your satisfaction is our pursuit!

